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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,632	01/23/2001	Min Soo Kim	P-183	8374

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EXAMINER	
TRAN, TUAN A	

ART UNIT	PAPER NUMBER
2682	7

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/766,632	Applicant(s) KIM ET AL.	
	Examiner Tuan A Tran	Art Unit 2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,14-16,20,23 and 26-29* is/are rejected.

7)☒ Claim(s) *17-19,21,22,24 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 2-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claims, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 05/20/2004.

Applicant's election with traverse of Group III in the reply filed on 05/20/2004 is acknowledged. The traversal is on the ground(s) that "the search and examination of the entire application could be made without serious burden". This is not found persuasive because: Invention I (group I) drawn to a speaker mechanism of a mobile phone wherein the speaker is mounted at the inner surface of the upper side of a drawer cover of the mobile phone and connected with an audio amplifier through a connecting member which comprises a plunger terminal of which one end is movably adhered to the surface of a wiring circuit of the mobile phone, classified in class 455, subclass 575.4; invention II (group II) drawn to an antenna mechanism of a mobile phone wherein the antenna comprises a moving terminal formed at the lower side of a whip part of the antenna, classified in class 455, subclass 575.7; and invention III (group III) drawn to an operating unit mechanism of a mobile phone wherein the operating unit comprises a driving motor for providing a driving force to move a drawer cover of the mobile phone, classified in class 379, subclass 433.12. The inventions are distinct from

each other if they are shown to be separately usable. In the instant case, invention [I] has a separate utility such as the speaker mechanism, invention [II] has separate utility such as the antenna mechanism, and invention [III] has separate utility such as the operating unit mechanism. See MPEP § 806.05(d). Therefore, the Examiner maintains that the inventions are distinct, each from the other for the reasons given above and have acquired a separate status in the art because the search required for Group [I] is not required for Group [II] or Group [III], restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 16, 23, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudisill et al. (6,208,874) in view of Martensson (5,151,946).

Regarding claims 1, 16 and 27-29, Rudisill discloses a drawer-type mobile phone (See figs. 28-21) comprising: a main body 264 provided with a microphone 274; a drawer cover 282 slidably movable linearly, having a panel form so as for both margins thereof to be moved along both sides faces of the main body 264; a speaker 292

mounted at the upper inner surface of the drawer cover 282, being connected with inherently an audio amplifier (mobile phone has to have audio amplifier for amplify audio signal to certain level before outputting to the speaker) of the main body 264 through a connection member 204, 206, 230, 232; an antenna 260 movably connected with inherently a tuner terminal (mobile phone has to have a tuner in order to tune to the assigned frequency band for signal reception) of the main body 264 and mounted in a manner of being able to interwork with the drawer cover 282 (See figs. 18-21 and col. 13 lines 11-26, col. 14 lines 19-33, 53-67). However, Rudisill does not mention that the drawer-type mobile phone comprises an operating unit for moving the drawer cover by one touch wherein the operating unit comprising an automatic moving member for vertically moving the drawer cover; a binding member for selectively binding one end of the drawer cover when the drawer cover is closed and releasing the binding state of the drawer cover when the drawer cover is opened; and a motion restraining member for restraining the drawer cover from releasing from the main body when the drawer cover is opened. Martensson teaches a drawer-type mobile phone (See figs. 3-8) comprising an operating unit for moving the drawer cover by one touch wherein the operating unit comprising an automatic moving member 22, 23 for vertically moving the drawer cover; a binding member 14, 15 for selectively binding one end of the drawer cover when the drawer cover is closed and releasing the binding state of the drawer cover when the drawer cover is opened; and a motion restraining member 16, 17 for restraining the drawer cover from releasing from the main body when the drawer cover is opened (See figs. 3-8 and col. 4 lines 39-60, col. 5 line 57 to col. 6 line 5). Since both Rudisill and

Martensson teach about drawer-type mobile phone, therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teachings of Martensson in modifying the drawer-type mobile phone as disclosed by Rudisill by having included an operating unit or moving the drawer cover by one touch for the advantage of giving the user higher degree of freedom by allowing the user to open the cover of the mobile phone electrically with one hand.

Regarding claim 23 and 26, Rudisill & Martensson disclose as cited in claim 16. Martensson further discloses the motion restraining member comprises a hooking groove 16 formed at the inner side of the drawer cover and elastic piece 17 formed at one side of the main body so as to be hooked by the hooking groove 16 when the drawer cover is opened wherein the elastic piece is made of a material which is inherently suitably deformed as being pressed by the drawer cover (See fig. 5 and col. 4 lines 55-60).

2. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudisill et al. (6,208,874) in view of Martensson (5,151,946) as applied to claim 1 above, and further in view of Juergens et al. (5,497,060).

Regarding claims 14-15, Rudisill & Martensson disclose as cited in claim 1. Martensson further discloses the operating unit comprises a driving motor 22 mounted at the main body for providing a driving force, wherein the motor turns via a worm wheel a screw which is fastened rotatably to the bottom of the drawer cover, and a control switch for turning On/Off the operation of the driving motor (See figs. 7-8 and col. 6 lines

1-5). However, they do not mention that the operating unit comprises: a pinion gear mounted at one side of the main body; a rack gear fixedly mounted at one side of the drawer cover to be engaged with the pinion gear; a worm gear unit for transmitting the driving force of the driving motor to the pinion gear, wherein the worm gear unit comprising a worm wheel fixedly mounted at the central shaft of the pinion gear and a worm gear mounted at the driving shaft of the drive motor, so as to be in mesh with the worm wheel. Juergens suggests a moving mechanism (See fig. 3) comprising a pinion gear; a rack gear to be engaged with the pinion gear; a worm gear unit for transmitting the driving force of the driving motor to the pinion gear, wherein the worm gear unit comprising a worm wheel fixedly mounted at the central shaft of the pinion gear and a worm gear mounted at the driving shaft of the drive motor, so as to be in mesh with the worm wheel (See fig. 3 and col. 4 lines 6-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the operating unit as disclosed by Rudisill & Martensson by replacing screw with the rack gear mounted at one side of the drawer cover to be engaged with the pinion gear combined with worm gear unit and motor as suggested by Juergens, for the advantage of giving the designer a higher degree of freedom in choosing an appropriate moving mechanism to accommodate theirs intentions as well as facilitating one-handed operation.

3. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudisill et al. (6,208,874) in view of Martensson (5,151,946) as applied to claim 16 above, and further in view of Holshouser et al. (6,151,486).

Regarding claim 20, Rudisill & Martensson disclose as cited in claim 16. However, they do not mention the binding member comprising: a metal piece attached at the lower end of the drawer cover; a solenoid attached at a predetermined portion of the main body corresponding to the metal piece; a key circuit board for supplying a voltage to the solenoid; and a press button for turning On/Off the key circuit board. Holshouser teaches a binding member of the mobile phone for selectively binding one end of the cover of the mobile phone when the cover is closed and releasing the binding state of the cover when the cover is opened (See figs. 6a-6c) comprising: a metal piece 60b attached at the lower end of the drawer cover; a solenoid 60 attached at a predetermined portion of the main body corresponding to the metal piece; a key circuit board 64, 65 for supplying a voltage to the solenoid; and a press button 66 for turning On/Off the key circuit board (See figs. 6a-6c and col. 5 lines 40-46, col. 6 lines 27-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the binding member as disclosed by Rudisill & Martensson by the one as taught by Holshouser for the advantage of eliminating the need for bulky and complex mechanical latching mechanism that can be susceptible to wear and other damage over time as well as positioning the control button anywhere on the device to facilitate one-handed operation.

Allowable Subject Matter

4. Claims 17-19, 21-22 and 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 17-18, Rudisill & Martensson disclose as cited in claim 16. However, they fail to disclose the pinion gear is a spring-type pinion gear.

Regarding claim 19, Rudisill & Martensson disclose as cited in claim 16. However, they fail to mention that the binding member comprising: a hooking protrusion provided at a predetermined portion of the side face inside the drawer cover; a press button having a support bar mounted at side surface of the main body, extending inwardly of the main body; a fixing support for supporting the front end of the support bar; a hooking piece mounted at the support bar for hooking the hooking protrusion in a closed state; and a twisted spring mounted at the support bar for applying an elastic force to one side of the hooking protrusion.

Regarding claims 21-22, Rudisill & Martensson disclose as cited in claim 16. However, they fail to disclose the binding member comprising: a metal piece attached at the lower end of the drawer cover and a press button attached to the main body in a manner of being vertically moved, having a magnet piece to attract the metal piece formed at one side thereof; or an upper magnet piece attached at the lower end of the drawer cover and a slide button attached at the main body so as to be horizontally movable by virtue of the spring, having a lower magnet piece to attract the upper magnet piece.

Regarding claims 24-25, Rudisill & Martensson disclose as cited in claim 23. However, they fail to disclose the elastic piece is formed in a manner that one end thereof is fixed at the main body and the other end is gently bent upwardly; or the elastic piece is formed in a manner that the central portion thereof is gently bent and protruded with both ends fixed at the main body.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan Tran** whose telephone number is **(703) 605-4255**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Vivian Chin**, can be reached at **(703) 308-6739**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Tuan Tran

Au 2682

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

8/9/04